

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed December 19, 2007. Claims 1-48 were pending in the Application. In the Office Action, Claims 1-48 were rejected. Claims 1-48 remain pending in the Application. Applicant respectfully requests reconsideration and favorable action in this case.

In the Office Action, the following actions were taken or matters were raised:

SECTION 112 REJECTIONS

Claims 43-48 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. In particular, the Examiner has indicated that the specification discloses that the computer-readable medium includes mediums "later developed." The Examiner asserts that the specification does not provide the means to enable one of ordinary skill in the art to make the invention with a computer-readable medium "later developed." Further, the Examiner states that the implementation would not be in the skills of one of ordinary skill in the art and would encompass undue experimentation.

Applicant respectfully submits that Claims 43-48 fully comply with the requirements pursuant to 35 U.S.C. § 112, first paragraph. However, in a good faith effort to advance prosecution, the Applicant has amended paragraph [0032] of the specification to remove the phrase "or later developed." In light of this amendment to the specification, the Applicant respectfully requests that the rejection of claims 43-48 under 35 U.S.C. §112, first paragraph, be withdrawn.

SECTION 101 REJECTIONS

Claims 1-12, 24-37, and 43-48 were rejected under 35 U.S.C. 101 because they fail to establish a statutory category of invention. Applicant respectfully traverses this rejection.

The Examiner states that Claims 1-12 and 24-37 recite a system comprising a drive command module which is defined as a software module and a redirector module which is embodied as a computer program (Office Action dated December 19, 2007, page 3). The

Examiner further asserts that the invention is “merely an interrelationship of software elements, which is software, per se.” The Applicant respectfully disagrees with this conclusion.

Of the rejected claims, Claims 1, 24 and 33 are independent. Applicant respectfully submits that independent Claims 1, 24 and 33 recite statutory subject matter and are therefore allowable. Furthermore, Claims 2-12, 25-32, and 34-37 that depend, either directly or through intervening claims, from Claims 1, 24 and 33, respectively, also recite statutory subject matter and also, therefore, are allowable.

M.P.E.P. § 2106 clearly sets forth that claims to computer-related inventions can be classified as non-statutory if they fall into the same category as non-statutory claims in other arts, namely natural phenomenon such as magnetism, and abstract ideas or laws of nature which constitute “descriptive material.” M.P.E.P. § 2106.01. However, descriptive material can be characterized as either “functional descriptive material” or “nonfunctional descriptive material.” M.P.E.P. § 2106.01. In this context, “functional descriptive material” consists of data structures and computer programs which impart functionality when employed as a computer component.” M.P.E.P. § 2106.01. “Nonfunctional descriptive material” includes but is not limited to music, literary works and a compilation or mere arrangement of data. M.P.E.P. § 2106.01. A claimed computer program which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized is statutory. M.P.E.P. § 2106.01. Therefore, claims which recite “functional descriptive material” are statutory. Against this backdrop, the Applicant respectfully submits that Claims 1, 24 and 33 each recite statutory subject matter.

Claim 1 recites, *inter alia*, “a drive command module” and a “redirector.” The drive command module is adapted to receive an I/O request referencing a local peripheral address for processing of the I/O request and the redirector is adapted to automatically convey the I/O request over a communication network to a remote peripheral device for processing the I/O request. Therefore, the drive command module and the redirector, even if considered to be computer programs, define structural and functional interrelationships with components of the rest of the computer, namely the communication network and the remote peripheral device,

which permits the functionality of the computer programs to be realized. Therefore, Claim 1 is statutory.

In addition, Claim 24 recites, *inter alia*, a “drive command module” and a “redirector.” The drive command module is adapted to receive a command to record data to an optical medium and the redirector is adapted to automatically format the command for processing by a remote optical drive. Like above, the drive command module and the redirector, even if considered to be software programs, define structural and functional interrelationships with a component of the rest of the computer, namely the remote optical drive, which permits the computer program’s functionality to be realized. Therefore, Claim 24 is statutory.

Further, claim 33 recites, *inter alia*, means for receiving an I/O request referencing a local peripheral address for processing of the I/O request and means for automatically conveying the I/O request over a communication network to a remote peripheral device. Therefore, even assuming, *arguendo*, that the means for receiving is a software module and that the means for automatically conveying is a computer program, the receiving means and the conveying means nonetheless define structural and functional interrelationships with components of the rest of the computer, namely the communication network and the remote peripheral device, which permits the functionality of the computer programs to be realized. Therefore, Claim 33 is statutory.

Because Claims 1, 24 and 33 each recite statutory subject matter, as noted above, Claims 2-12, 25-32 and 34-37 which depend therefrom are also statutory at least because these claims inherit all the limitations of their base claim. Therefore, for at least this reason, Applicant respectfully submits that the Examiner’s rejection of Claims 1-12 and 24-37 is improper and that these claims are allowable.

Claim 43 recites, *inter alia*, a “computer readable medium having stored thereon an instruction set” that, when “executed by a processor, causes the processor to: receive an input/output (I/O) request referencing a local peripheral address for processing of the I/O request” and to “automatically convey the I/O request over a communication network to a remote peripheral device for processing the I/O request” (emphasis added). Here, the instruction set defines structural and functional interrelationships with components of the rest of the computer, namely the communication network and the remote peripheral device, which

permits the functionality of computer programs to be realized. Moreover, according to M.P.E.P. § 2106.01, "when functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized." Claim 43 also recites a "computer readable medium having stored thereon an instruction set" (emphasis added). Therefore, Claim 43 is statutory.

Because Claim 43 recites statutory subject matter, as noted above, Claims 44-48 which depend therefrom are also statutory at least because these claims inherit all the limitations of their base claim. Therefore, for at least this reason, Applicant respectfully submits that the Examiner's rejection of Claims 43-48 is improper and should be withdrawn.

SECTION 103 REJECTIONS

Claims 1-23, 33-37, and 43-48 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,173,374 issued to Heil et al. (hereinafter "*Heil*") in view of U.S. Patent No. 6,901,451 issued to Miyoshi et al. (hereinafter "*Miyoshi*"). Applicant respectfully traverses these rejections.

Of the rejected claims, Claims 1, 13, 33 and 43 are independent. Applicant respectfully submits that the combination of *Heil* with *Miyoshi* does not disclose or even suggest each and every limitation of independent Claims 1, 13, 33 and 43. For example, the Applicant submits that *Heil-Miyoshi* does not disclose or even suggest a "drive command module adapted to receive an I/O request referencing a local peripheral address" and a "redirector adapted to automatically convey the I/O request over a communication network to a remote peripheral device" (emphasis added).

With reference to Claim 1, in the Office Action the Examiner alleges that *Heil* only fails to teach or suggest the local peripheral address but that *Miyoshi* supplies this missing limitation (Office Action dated December 19, 2007, page 4) The Applicant must respectfully disagree. In particular, the Applicant submits that *Heil* fails to teach or suggest automatically conveying the I/O request referencing a local peripheral address to a remote peripheral device as recited in Claim 1.

In the section of *Heil* relied upon by the Examiner, namely Col. 11, lines 45-52, *Heil* discloses that:

After receiving a block I/O request 400, the 110 redirector has the means to search the directory and determining means to locate the local or remote disk drives that are storing the I/O requested blocks 410. If the location of the blocks is local 420, then the blocks are retrieved from the respective local disk drive.

If the requested I/O block is stored in a remote disk, the initiating HBA ships the block I/O request to the peer HBA that the initiating HBA has determined can perform the requisite processing 450.

As the above passage from *Heil* makes clear, after receiving a block I/O request, the redirector searches the directory and locates the appropriate disk, which may be local or remote, having the requested block data. As such, *Heil* does not appear to disclose automatically conveying the I/O request referencing a local peripheral address to a remote peripheral device as recited in Claim 1. In contrast, if the result of the search in *Heil* indicates that the block data is local, the data is retrieved from the local disk drive. In other words, when a request for locally stored information is made in *Heil*, the request is routed to the local disk drive.

In addition, when the information in *Heil* is stored locally, there does not appear to be an I/O request to any remote device. Indeed, the information in *Heil* is simply accessed locally. Only if the data block in the I/O request is stored in a remote disk does *Heil* access a remote device. Therefore, *Heil* appears to teach that I/O requests for local data are handled by local drives and I/O requests for remote data are handled by remote drives. In contrast, Claim 1 recites that I/O requests referencing a local peripheral address are automatically conveyed to a remote drive.

In light of the above, *Heil* does not appear to teach or suggest automatically conveying the I/O request referencing a local peripheral address. *Heil* performs a search for the desired data blocks instead as is recited in Claims 1, 13, 33 and 43. In addition, *Heil* does not appear to teach or suggest conveying the I/O request referencing a local peripheral address to a remote peripheral device as is recited in Claims 1, 13, 33 and 43. Indeed, *Heil* appears to disclose conveying local requests to local devices. In contrast, Claim 1 automatically conveys the I/O request referencing a local peripheral address to a remote peripheral device.

Even if *Miyoshi* were to supply the local peripheral address to execute the I/O request missing from *Heil* as asserted by the Examiner (Office Action dated December 19, 2007, page 4), *Miyoshi* does not appear to cure the deficiencies of *Heil* as noted above. Namely, *Miyoshi* does not appear to teach or suggest automatically conveying the I/O request referencing a local peripheral address or conveying the I/O request referencing a local peripheral address to a remote peripheral device. As such, it is respectfully submitted that Claims 1, 13, 33 and 43 are patentable over the cited references.

Claims 2-12, 14-23, 34-37, and 44-48, either directly or through intervening claims, include all the limitations of base Claims 1, 13, 33, or 43. As such, Claims 2-12, 14-23, 34-37, and 44-48 are believed to be patentable for the reasons noted above for Claims 1, 13, 33 and 43.

Claims 24-32 and 38-42 were rejected under 35 USC §103(a) as being unpatentable over *Heil* and in view of *Miyoshi* and further in view of U.S. Patent No. 5,987,541 issued to Hewitt (hereinafter "*Hewitt*"). Applicant respectfully traverses these rejections.

Of the rejected claims, Claims 24 and 38 are independent. Applicant respectfully submits that the combination of *Heil* with *Miyoshi* and *Hewitt* does not disclose or even suggest each and every limitation of independent Claims 24 and 38. For example, the Applicant submits that the combination of references does not disclose or even suggest a "drive command module adapted to receive a command to record data to an optical medium" and to "automatically format the command for processing by a remote optical drive" (emphasis added).

The Examiner indicates that "*Heils-Miyoshi* do not explicitly disclose that the I/O request is to record data to an optical medium, however *Miyoshi* does disclose that the I/O request can be a write request" (Office Action dated December 19, 2007, pages 7-8, emphasis added). Thereafter, the Examiner states that, in analogous art, "*Hewitt* discloses another computer system which discloses an optical drive (i.e., CD-ROM drive 132) on a PCI bus 120" (Office Action dated December 19, 2007, page 8, emphasis added).

The Applicant respectfully submits that a conventional CD-ROM, such as the one discloses in *Hewitt*, is only equipped to read data from an optical medium and is not equipped to write data to an optical medium. In that regard, the Applicant notes that the CD-ROM drive of

Hewitt does not appear to have write capabilities and is believed to be limited to reading from a compact disc. Indeed, in Col. 8, lines 12-27, *Hewitt* states:

An exemplary communication accommodated by the computer system 100 of FIG. 1 is next described. Consider a read transaction carried out to transfer data from the modulated-signal-compatible CD-ROM drive 132 to the modulated-signal-compatible video/graphics card 126 over communication channel 2 of the PCI bus 120. The CD-ROM drive 132 first requests and is granted control of communication channel 2 of the PCI bus 120 using data-modulated carrier signals as described above. During the address phase of the read transaction, the modulation interface 172 of the video/graphics card 126 drives data-modulated carrier signals upon the address/data lines of the PCI bus 120 conveying an address assigned to the CD-ROM drive 132.

(emphasis added). *Hewitt* appears to disclose that the CD-ROM drive 132 is able to carry out a read transaction. However, the CD-ROM of *Hewitt* does not appear to disclose any ability to handle or process a write transaction. Therefore, even if *Miyoshi* were to issue a write request, as alleged by the Examiner, the CD-ROM of *Hewitt* would be unable to do anything with the write request. Therefore, the combination of *Heil*, *Miyoshi* and *Hewitt* does not appear to disclose the ability to automatically format the drive command to record data to an optical medium for processing by the remote optical drive. Simply put, there does not appear to be any optical drive in the combination of references capable of receiving, formatting or carrying out any write command. Further, the combination of *Heil*, *Miyoshi* and *Hewitt* does not appear to disclose formatting a drive command before transmitting the drive command to a remote optical drive. As such, it is respectfully submitted that Claims 24 and 38 are not obvious and are patentable.

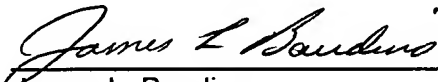
Claims 25-32 and 39-42, either directly or through intervening claims, include all the limitations of base Claims 24 and 38. As such, Claims 25-32 and 39-42 are believed to be patentable for the reasons noted above for Claims 24 and 38.

CONCLUSION

Applicant has made an earnest attempt to place this case in condition for immediate allowance. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully request reconsideration and full allowance of all pending claims.

No fee is believed due with this Response. If, however, Applicant has overlooked the need for any fee due with this Response, the Commissioner is hereby authorized to charge any fees or credit any overpayment associated with this Response to Deposit Account No. 08-2025 of Hewlett-Packard Company.

Respectfully submitted,

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